

## Amyloid beta Peptide 42 ELISA Kit | Abeta42 elisa kit

Multiplex Human Amyloid Beta 42 ELISA Kit

CATALOG #  
**AAA77893**

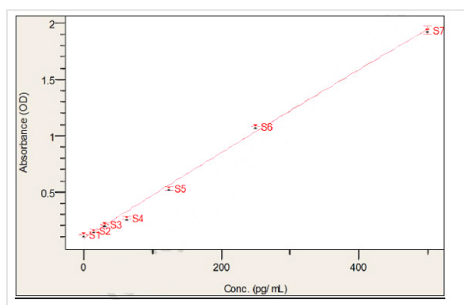
### PRODUCT SYNONYMS

Amyloid beta Peptide 42; Multiplex Human Amyloid Beta 42 ELISA Kit; Amyloid beta Peptide 42 (Abeta42); Abeta42 elisa kit

### PRODUCT SPECIFICATIONS

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| Specificity             | The following substances were tested and found to have no cross-reactivity: human Abeta40 (100ng/mL), human Abeta43 (10ng/mL), alpha-Synuclein (100ng/mL).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Samples                 | Cell culture supernatant and other biological fluids.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Assay Type              | Sandwich                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Sensitivity             | <6.54pg/mL.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Intra-assay Precision   | To determine within-run precision, three different samples of known concentration added were assayed by using 16 replicates in 1 assay.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Inter-assay Precision   | To determine between-run precision, three different samples of known concentration were measured by using replicates on 8 different assays.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Preparation and Storage | <p><b>SUBSTRATE B (20% ACETONE)</b><br/>           Handling Procedures and Equipment - Wear proper personal protective equipments. Keep away from heat, sparks and flame. Do not ingest. Do not breathe gas/ fumes/ vapor/ spray. Do not get in eyes, on skin or on clothing.<br/>           Storage Requirements - 2-10 degree C</p> <p><b>STOP SOLUTION (2N SULFURIC ACID)</b><br/>           Handling Procedures and Equipment - Wear proper personal protective equipments. Avoid generating mist. Do not ingest. Do not breathe gas/ fumes/ vapor/ spray. Do not get in eyes, on skin or on clothing.<br/>           Storage Requirements - 2-10 degree C</p> <p><b>TISSUE HOMOGENIZATION BUFFER (5M GUANIDINE HYDROCHLORIDE)</b><br/>           Handling Procedures and Equipment - Wear proper personal protective equipments. Avoid generating mist. Do not ingest. Do not breathe gas/ fumes/ vapor/ spray. Do not get in eyes, on skin or on clothing.<br/>           Storage Requirements - 2-10 degree C</p> |

### IMAGES



Standard Curve (Sample)

## ADDITIONAL INFORMATION

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| <b>Related Product Information for Abeta42 elisa kit</b> | <p><b>Intended Uses:</b> This human Abeta42 ELISA kit is to be used for the in vitro quantitative determination of human Abeta42 concentrations in cell culture supernatant and other biological fluids. This kit is intended for <b>LABORATORY RESEARCH USE ONLY</b>.</p> <p><b>Principle of the Assay</b>  This enzyme-linked immunosorbent assay (ELISA) applies a technique called a quantitative sandwich immunoassay. The microtiter plate provided in this kit has been pre-coated with a monoclonal antibody specific for human Abeta42. When standards or samples are added to the appropriate microtiter plate wells, human Abeta42 in the standards or samples will be immobilized by the pre-coated antibody during incubation. Then, a biotin-conjugated antibody preparation specific for human Abeta42 is added to each well and incubated. The biotin labelled antibody attaches to the wells by binding to human Abeta42. After plate washing, other proteins, components and unattached biotin labelled antibody is removed. After that, avidin-horseradish peroxidase (HRP) conjugate is added to each well. Avidin has a very high affinity for biotin, thus, it links the tracer (HRP) sturdily to the biotin labelled antibody. The wells are thoroughly washed to remove all unbound avidin-HRP conjugate and a TMB (3,3',5,5' tetramethyl-benzidine) substrate solution is added to each well. The enzyme (HRP) and substrate are allowed to react over a short incubation period. Only wells that contain human Abeta42 will exhibit a change in colour. The extent of colour change is proportional to the quantity of human Abeta42 presented in the standards/samples. The enzyme-substrate reaction is terminated by the addition of a sulphuric acid solution and the colour change is measured spectrophotometrically at a wave length of 450 nm +/- 2 nm. According to the testing system, the provided standard is diluted (2-fold) with the appropriate diluent and assayed at the same time as the samples. This allows the operator to produce a curve of Optical Density (O.D.) versus human Abeta42 concentration (pg/mL) in standards. The concentration of human Abeta42 in the samples is then determined by comparing the O.D. of the samples to the standard curve and multiplying with sample dilution factor. In order to measure the concentration of human Abeta42 in tissue samples, a Tissue Homogenization Buffer is included in the kit for sample processing.</p> <p><b>Background/Introduction:</b> Alzheimer's disease (AD) is a neurodegenerative disease that affects about 6% senior people worldwide. It is characterized by the formation of extracellular amyloid plaques, the accumulation of neurofibrillary tangles in neurons, and loss of neurons in some area of the brain. Amyloid beta peptide 42 (Abeta42) has a tendency toward forming beta pleated structure and precipitation. It constitutes the initial and key component of the insoluble amyloid fibril in the plaque. Abeta42, like other amyloid peptides, is formed by the sequential cleavage of amyloid precursor protein by beta-secretase and gamma-secretase. Abeta40, Abeta42 and Abeta43 are different only at the few C-end amino acids. Abeta42 is believed to contribute to the pathogenesis of AD. One hypothetical mechanism is that the deposition of amyloid fibril onto the brain tissue results in AD. Another hypothesis is that the neurotoxicity of Abeta42 oligomer is the cause of the disease. Study suggested that lower than normal Abeta42/ Abeta40 ratio in cerebrospinal fluid could predicate development of AD. In blood and cerebrospinal fluid, the concentration of Abeta40 is about 10 times higher than that of Abeta42. Hyper-phosphorylated Tau protein forms neurofibrillary tangles inside neurons. Study found that Abeta42 level is lower and phosphorylated Tau protein level is higher in the cerebrospinal fluid of AD patients comparing with normal control and other dementia conditions. This Abeta42 ELISA kit can be used for measuring Abeta42 in tissue homogenate, cell culture supernatant, and other biological fluids. The kit is for research use only</p> |
| <b>Product Categories/Family for Abeta42 elisa kit</b>   | <b>ELISA Kits for Human Inflammatory and Antioimmune Conditions</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/abeta42-elisa-kits/amyloid-beta-peptide-42/77893>